M0450030
Task ID# 3847
cc: Leslie
Wayne

April 7, 2011

Paul B. Baker
Mining Program Manager
State of Utah
Department of Natural Resources
Division of Oil, Gas and Mining
1594 West North Temple, Suite 1210
P.O. Box 145801
Salt Lake City, Utah 84114-5801

RE: M0450030 Cargill Salt Reclamation Surety Cost Estimate

Dear Mr. Baker,

Per your November 10, 2010 letter to Ryan Doherty requesting a revised reclamation surety using spreadsheets developed by the Division, we are submitting the enclosed hard copy print-outs of the revised estimate as well as an e-mail with electronic versions of the spreadsheets.

Although Cargill has made no changes to our facility since preparation of the previous cost estimate, the level of detail required by the new forms necessitated a thorough review of our operations. Based on guidance from Leslie Heppler and Wayne Western, we have included a number of items that do not appear to have been detailed in the previous reclamation cost estimate, such as concrete building footings, aboveground storage tanks, and rail spur removal. We appreciate the deadline extension granted by Ms. Heppler, and the assistance Ms. Heppler and Mr. Western provided in navigating the new forms.

Following approval of the revised reclamation surety, we will prepare and submit an updated Reclamation Contract. Please contact me at (435) 884-4154, or Teri Peterson or ERM at (801) 595-8400, with questions or comments.

Sincerely,

Joseph Recor,
EHS Sr. Professional

cc: Leslie Heppler, DOGM
Teri Peterson, ERM

Bonding Calculations

Direct Costs		
Subtotal Demolition and Removal	$1,655,625.20	
Subtotal Backfilling and Grading	$558,517.18	
Subtotal Revegetation	$79,375.00	
Direct Costs	$2,293,517.38	
Indirect Costs		
Mob/Demob	$229,352.00	10.0%
Contingency	$114,676.00	5.0%
Engineering Redesign	$57,338.00	2.5%
Main Office Expense	$155,959.00	6.8%
Project Management Fee	$57,338.00	2.5%
Subtotal Indirect Costs	$614,663.00	26.8%
Total Cost 2011	$2,908,180.38	
Number of years		5
Escalation factor		0.017
Escalation	$255,744.00	
Reclamation Cost Escalated	$3,163,924.38	
Bond Amount (rounded to nearest $1,000) 2016 Dollars on 2500-Acres Permitted/Bonded Area	$3,164,000.00	
Posted Bond	$2,100,200.00	
Difference Between Cost Estimate and Bond	-$1,063,800.00	
Percent Difference		

Ref.	SUMMARY OF DEMOLITION	Materials	Means Reference Number	Unit Cost	Unit	Swell Factor	Quantity	Unit	Cost
	Cinderblock structures								52,625
	Steel structures								241,382
	Mixed material buildings								1,091,933
	Remaining structures								79,082
	Concrete								40,605
	Utilities								150,000
									1,655,625

Ref.	Description	Materials	Means Reference Number (2011)	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Cinder Block bldgs	Cinder Block																		
	Truck Loading/Office (Plot B)		02 41 16.13 0080	0.33	CF	108.00	34.00	20.00										73,440.00	CF	24,235
	Bag Storage Building (Plot B)		02 41 16.13 0080	0.33	CF	80.00	55.00	15.00										66,000.00	CF	21,780
	Washplant Control Room (Plot D)		02 41 16.13 0080	0.33	CF	10.00	10.00	10.00										1,000.00	CF	330
	Fire/Process Water Pump Station (Plot B)		02 41 16.13 0080	0.33	CF	10.00	10.00	10.00										1,000.00	CF	330
	Secondary Containment (fuel tank - plot A)		02 41 16.13 0080	0.33	CF	40.00	15.00	4.00										2,400.00	CF	792
	Pump Station (Pump P-4)		02 41 16.13 0080	0.33	CF	16.00	16.00	4.00										1,024.00	CF	338
	Pump Station (Pump P-5)		02 41 16.13 0080	0.33	CF	16.00	10.00	5.00										800.00	CF	264
	Deduct 50% no interior walls (Note 3)																			-11748
	32 miles to Tooele County Landfill																			
	Total Volume of Materials																	145,664.00	CF	
	Volume of Debris																0.3	43,699.20	CF	
	Weight of Debris (Note 1)												70			lb/cf		1,529.47	Tons	
	No. of Trips - 16 Tons																	96	Trip	
	Round trip haul time (beyond 20 miles assumed by means)			0.50	HR															
	Haul to Tooele County Landfill	Truck Dump 16 Ton Payload	Note 4	137.50	Day													23.90	Day	3,286
	Truck Driver	Truck driver, Heavy	Trhv	52.25	HR													47.80	HR	2,497
	Disposal Costs @ Tooele County Landfill (Note 2)			6.50	$/CY													1,618.49	CY	10,520
	Subtotal																			52,625
	Total																			**52,625**

Note 1: Material densities based on Central Contra Costa Solid Waste Authority Weight Conversion Table (http://www.wastediversion.org/files/managed/Document/230/Weight-Conversion-Table%20_Generic.pdf).
Note 2: Disposal costs based on quote from Tooele County Landfill for C&D debris; February 2011.
Note 3: The truck loading/office is the only building/structure with interior walls. For the remaining buildings/structures, 50% was deducted.
Note 4: Based on RS Means equipment rental costs for 16 ton, three axle dump truck, 12 CY payload, 400 HP; per DOGM using monthly rent/176 hrs/mo to obtain hourly rate ($17.19/hr).

Ref.	Description	Materials	Means Reference Number (2011)	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Steel Structures																			
	Rail Loading/Rail Scale (Plot B)		02 41 16.13 0020	0.31	CF	350	50	30										525,000.00	CF	162,750
	Conex Storage Box (2) (Plot B and D)		02 41 16.13 0020	0.31	CF	40	8	8							2			2,560.00	CF	1,587
	Truck Scale (Plot B)		02 41 16.13 0020	0.31	CF	110	10	4										4,400.00	CF	1,364
	Longbelt and Stacker (Plot C)		02 41 16.13 0020	0.31	CF	50	30	20										30,000.00	CF	9,300
	Deicing salt truck loading (Plot F)		02 41 16.13 0020	0.31	CF	20	14	23										6,440.00		
	Grizzly (Screener) (Plot C)		02 41 16.13 0020	0.31	CF	20	20	20										8,000.00	CF	2,480
	Washplant (Plot D)		02 41 16.13 0020	0.31	CF	60	20	30										36,000.00	CF	11,160
	Material Breakdown																			
	Steel																			
	39 miles to Western Metals																			
	Total Volume of Materials																	612,400.00	CF	
	Volume of Debris																0.3	183,720.00	CF	
	Weight of Debris (Note 2)												35			lb/cf		3,215	Tons	
	No. of Trips - 16 Tons																	201	Trip	
	Round trip haul time (beyond 20 miles assumed by means)			0.50	HR															
	Haul to Western Metals	Truck Dump 16 Ton Payload	Note 1	137.50	Day													12.56	Day	1,727
	Truck Driver	Truck driver, Heavy	Trhv	52.25	HR													100.47	Hr	5,250
	Disposal Costs @ Western Metals			0.00	Ton															
	Subtotal																			195,618
	Storage Tanks (Aboveground single-wall steel tanks, assume drain and disposal at Western Metals)																			
	Fuel Tanks x 2 (Plot A)	Steel Tank, volume = 500 and 500 gallon																		
	Fuel Tank (Plot A)	Steel Tank, volume = 10,000 gallon																		
	Steel Tanks x 2 (Plot F)	Steel Tank, volume = 4,000 and 4,500 gallon																		
	Fuel Tank @ P-4 Pump Station	Steel Tank, volume = 3,200 gallon																		
	Fuel Tank @ P-5 Pump Station	Steel Tank, volume = 4,000 gallon																		
	Remove Sludge, water remaining produc	500 gal tank	02 65 10.30 0813	80	EA										2			2	EA	160
	Remove Sludge, water remaining produc	3000 gal to 5000 gal tank	02 65 10.30 0300	266	EA										4			4	EA	1,064
	Remove Sludge, water remaining produc	9000 gal to 12000 gal tank	02 65 10.30 0310	330	EA										1			1	EA	330
	Dispose of Sludge Off-site, Avg	Assume 1/3 ea tank volume	02 65 10.30 0390	6.60	GAL						1/3 x 18,200 (fuel tanks only)							6066.67	GAL	40,040
	Haul Tank to certified salvage, 100 miles	3000 gal to 5000 gal tank	02 65 10 30 1023	780	Ea.										4			4	EA	3,120
	Haul Tank to certified salvage, 100 miles	9000 gal to 12000 gal tank	02 65 10 30 1029	1,050	Ea.										1			1	EA	1,050
	Subtotal																			45,764
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			241,382

Note 1: Based on RS Means equipment rental costs for 16 ton, three axle dump truck, 12 CY payload, 400 HP; per DOGM using monthly rent/176 hrs/mo to obtain hourly rate ($17.19/hr).
Note 2: Material densities based on Central Contra Costa Solid Waste Authority Weight Conversion Table (http://www.wastediversion.org/files/managed/Document/230/Weight-Conversion-Table%20_Generic.pdf).

Ref.	Description	Materials	Means Reference Number (2011)	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Mixed Structures (steel, concrete, resillite)																			
	Vehicle Maintenance Facility (Plot A)		02 41 16.13 0100	0.33	CF	120	60	30										216,000.00	CF	71,280
	Maintenance Supply Building (Plot B)		02 41 16.13 0100	0.33	CF	60	40	15										36,000.00	CF	11,880
	Warehouse/Mill/Bulk Salt Storage (Plot B)		02 41 16.13 0100	0.33	CF	440	150	40										2,640,000.00	CF	871,200
	Deduct 50% no interior walls (Note 1)																			-41580
	Material Breakdown																			
	Steel (assume 30%)																			
	39 miles to Western Metals																			
	Total Volume of Materials																	867,600.00	CF	
	Volume of Debris																0.3	260,280.00	CF	
	Weight of Debris (Note 3)												35			lb/cf		4,555	Tons	
	No. of Trips - 16 Tons																	285	Trip	
	Round trip haul time (beyond 20 miles assumed by means)			0.50	HR															
	Haul to Western Metals	Truck Dump 16 Ton F	Note 2	137.50	Day													17.79	Day	2,446
	Truck Driver	Truck driver, Heavy	Trhv	52.25	HR													142.34	Hr	7,437
	Disposal Costs @ Western Metals			0.00	Ton															
	Other Material (assume 70%)																			
	32 miles to Tooele County Landfill																			
	Total Volume of Materials																	2,024,400.00	CF	
	Volume of Debris																0.3	607,320.00	CF	
	Weight of Debris (Note 3)												35			lb/cf		10,628	Tons	
	No. of Trips - 16 Tons																	664	Trip	
	Round trip haul time (beyond 20 miles assumed by means)			0.50	HR															
	Haul to Tooele County Landfill	Truck Dump 16 Ton F	Note 2	137.50	Day													41.52	Day	5,708
	Truck Driver	Truck driver, Heavy	Trhv	52.25	HR													332.13	Hr	17,354
	Disposal Costs @ Tooele County Landfill			6.50	$/CY													22,493.33	CY	146,207
	Subtotal																			1,091,933
	Total																			**1,091,933**

Note 1: The vehicle maintenance facility and maintenance supply building have no interior walls.
Note 2: Based on RS Means equipment rental costs for 16 ton, three axle dump truck, 12 CY payload, 400 HP; per DOGM using monthly rent/176 hrs/mo to obtain hourly rate ($17.19/hr).
Note 3: Material densities based on Central Contra Costa Solid Waste Authority Weight Conversion Table (http://www.wastediversion.org/files/managed/Document/230/Weight-Conversion-Table%20_Generic.pdf).

Ref.	Description	Materials	Means Reference Number (2011)	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Training Building	Wood	02 41 16.13 0700	0.33	CF	45	45	15								F		30,375.00	CF	10,024
	Paved Truck Parking	Bituminous road, 3" thick	02 41 13.17 5010	5.20	SY	135	85									Y		11,475.00	SY	59,670
	Pipe at Pump Station P-4	2x HDPE pipe, 2'ODx40 ft	02 41 13.38 1900	7.05	LF	40									2	F		80.00	LF	564
	Pipe at Pump Station P-5	metal pipe, 3'ODx200 ft	02 41 13.38 1200	25.00	LF	200										F		200.00	LF	5,000
	Disposal Costs - Wood Building, HDPE Pipe, and Asphalt																			
	32 miles to Tooele County Landfill																			
	Volume of Asphalt (Note 1)																1.3	33,564.38	CF	
	Volume of HDPE Pipe (Note 2)																1	251.20	CF	
	Volume of Debris from Wood Building Demo																0.3	9,112.50	CF	
	Weight of Debris (Note 3)												35			lb/cf		751	Tons	
	No. of Trips - 16 Tons																	47	Trip	
	Round trip haul time (beyond 20 miles assumed by means)			0.50	HR															
	Haul to Tooele County Landfill	Truck Dump 16 Ton Payload	Note 2	137.50	Day													2.93	Day	403
	Truck Driver	Truck driver, Heavy	Trhv	52.25	HR													23.48	Hr	1,227
	Disposal Costs @ Tooele County Landfill			6.50	$/CY													337.50	CY	2,194
	Subtotal																			79,082
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			**79,082**

Note 1: # SY of asphalt x 9 SF/SY x 3" thick x 1.3 (swell factor)
Note 2: Volume of each HDPE pipe is 125.6 CF; assume pipe is cut to lengths for disposal but not crushed
Note 3: Material densities based on Central Contra Costa Solid Waste Authority Weight Conversion Table (http://www.wastediversion.org/files/managed/Document/230/Weight-Conversion-Table%20_Generic.pdf).

Ref.	Description	Materials	Means Reference Number (2011)	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Building Foundations																			
	Maintenance Supply Building (Plot B)	Concrete demo	DOGM cost	11.38	CY	60.00	40.00	0.5								F		44.44	CY	505.78
	Warehouse/Mill/Bulk Salt Storage (Plot B)	Concrete demo	DOGM cost	11.38	CY	440.00	150.00	0.5								F		1,222.22	CY	13,908.89
	Vehicle Maintenance Facility (Plot A)	Concrete demo	DOGM cost	11.38	CY	120.00	60.00	0.5								F		133.33	CY	1,517.33
	Washplant (Plot D)	Concrete demo	DOGM cost	11.38	CY	60.00	20.00	0.5								F		22.22	CY	252.89
	Bag Storage Building (Plot B)	Concrete demo	DOGM cost	11.38	CY	80.00	55.00	0.5								F		81.48	CY	927.26
	Truck Loading/Office (Plot B)	Concrete demo	DOGM cost	11.38	CY	108.00	34.00	0.5								F		68.00	CY	773.84
	Washplant Control Room (Plot D)	Concrete demo	DOGM cost	11.38	CY	10.00	10.00	0.5								F		1.85	CY	21.07
	Fire/Process Water Pump Station (Plot B)	Concrete demo	DOGM cost	11.38	CY	10.00	10.00	0.5								F		1.85	CY	21.07
	Concrete foundation (previous office south of ba	Concrete demo	DOGM cost	11.38	CY	70.00	35.00	0.5								F		45.37	CY	516.31
	Misc Concrete																			
	Grizzly concrete pad (Plot C)	Concrete demo	DOGM cost	11.38	CY	60	0.5	5								F		5.56	CY	63.22
	Tarping Station (Plot B)	Concrete demo	DOGM cost	11.38	CY	15	3	4							2	F		13.33	CY	151.73
	Outside Storage (Plot B)	Concrete demo	DOGM cost	11.38	CY	20	20	0.5								F		7.41	CY	84.30
	Truck Dock at Bag Storage Building (Plot B)	Concrete demo	DOGM cost	11.38	CY	15	7	4								F		15.56	CY	177.02
	Secondary Containment (fuel tanks - plot A)	Concrete demo	DOGM cost	11.38	CY	40	15	0.5								F		11.11	CY	126.44
	Secondary Containment (Pump P-4)	Concrete demo	DOGM cost	11.38	CY	10	14	0.5								F		2.59	CY	29.50
	Secondary Containment & bldg (Pump P-5)	Concrete demo	DOGM cost	11.38	CY	10	14	0.5								F		2.59	CY	29.50
	Truck Loading Ramp (Plot F)	Concrete demo	DOGM cost	11.38	CY	21	21	0.5								F		8.17	CY	92.94
	Pad for Steel Tanks (Plot F)	Concrete demo	DOGM cost	11.38	CY	48	24	0.5								F		21.33	CY	242.77
	Concrete Gate Structure (P4 Pump Station)	Concrete demo	DOGM cost	11.38	CY	58	13	1								F		27.93	CY	317.80
	Concrete Gate Structure (P4 Pump Station)	Concrete demo	DOGM cost	11.38	CY	20	7	0.5								F		2.59	CY	29.50
	Concrete Gate Structure (P4 Pump Station)	Concrete demo	DOGM cost	11.38	CY	17	14	0.5								F		4.41	CY	50.16
	Concrete Gate Structure (P5 Pump Station)	Concrete demo	DOGM cost	11.38	CY	16	32	4								F		75.85	CY	863.19
	Concrete Gate Structure (P5 Pump Station)	Concrete demo	DOGM cost	11.38	CY	16	32	0.5								F		9.48	CY	107.90
	Concrete Gate Structure (P5 Pump Station)	Concrete demo	DOGM cost	11.38	CY	14	24	0.66								F		8.21	CY	93.47
	Concrete's Vol. After Demolition																1.3	2,387.97	CY	
	Disposal on site (Note 1)		02 41 16.17 4200	8.25	$/CY													2,387.97	CY	19,700.74
	Subtotal																			40,604.64
	Total																			**40,604.64**

Note 1: Cargill is the landowner for the plant site, so disposal on site would be allowed.

Ref.	Description	Materials	Means Reference Number (2011)	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Rail Spur			50.00	LF	3000										LF		3,000.00	LF	150,000
	Pad Mounted Transformer		Note 2	0	EA										1	EA			EA	0
	Power Lines (excl. service to MagCorp)		Note 2	0	LF	2250										LF			LF	0
	Subtotal																			150,000
	Concrete Demolition																			
	Demolition Cost																			
	Concrete's Vol. Demolished																			
	Loading Cost																			
	Transportation Cost																			
	Disposal Costs																			
	Subtotal																			
	Total																			**150,000**

Note 1: Buried gas and water lines to be left in place and capped. Fuel right-of-way not included in reclamation.
Note 2: Based on quote from Halverson Company; includes removal of rail, ties, grading, and transport/recycling of rail.
Note 3: According to Rocky Mountain Power, the utility would remove the power lines and transformer for a facility being demolished.

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Open wooden gates to allow natural erosion															2,683
Rip/remove salt stockpiles															107,466
Regrade disturbed areas															56,954
Topsoil for salt stack area															391,414
Total															**558,517**

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Open wooden gates to allow natural erosion															
Open all wooden gates									24.00	gates					2,683
Remove salt stockpiles															
Remove salt stockpiles in Plot C and F									31.24	acres					
Rip Plot C and F salt stockpiles									31.24	acres					
Regrade disturbed areas															
Regrade dirt roads/disturbed area at Plot A									3.20	acres					
Regrade dirt roads/disturbed area at Plot B									11.61	acres					
Regrade dirt roads/disturbed area at Plot C									29.64	acres					
Regrade dirt roads/disturbed area at Plot D									4.80	acres					
Regrade dirt roads/disturbed area at Plot F									1.60	acres					
									50.85	*acres*	*Total disturbed area*				
Topsoil for salt stack area															
Topsoil to cover Plot C, 1.6 acre Plot F to 12"									31.24	acres					
Topsoil excavation/loading									50,401	CY					
Topsoil transportation, 7 miles one way (assume 20 miles)									50,401	CY					
Topsoil, spread dumped material, no compaction									50,401	CY					
Total															2,683

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Open wooden gates to allow natural erosion															
Open all wooden gates									24.00	gates					
Laborer [1]				52.70		1	52.7	$/hr	40.00	hours					2,108
Pickup truck, 3/4 ton [1]	115.06					1	115.06	$/day	5.00	days					575
Total														**Total**	**2,683**

(1) Means 2011, Crews breakdown

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Means Reference Number	Cost	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Units	Cost
Remove and Rip salt stockpiles - Plots C & F									31.24	acre								
Laborers				52.70		2	105.40	$/hr	4	week	Means 2011							16,864
Operators				67.75		2	135.50	$/hr	4	week	Equip. Op. (med.) Means 2011							21,680
F.E. Loader						1	1026.74	$/day	4	week	Means 2011 - 5.5 CY Loader							20,535
D9T Dozer						1	2315.50	$/day	4	week	Means 2011 - 410 HP dozer							46,310
Ripper, beam & 2 shanks						1	103.84	$/day	4	week	Means 2011							2,077
																	Total	107,466

1. Time based on daily output of 7,500 BCY per day.

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Means Reference Number	Cost	Units	Cost
Regrade disturbed areas																	
Regrade dirt roads/disturbed area at Plot A									3.20	acres							
Regrade dirt roads/disturbed area at Plot B									11.61	acres							
Regrade dirt roads/disturbed area at Plot C									29.64	acres							
Regrade dirt roads/disturbed area at Plot D									4.80	acres							
Regrade dirt roads/disturbed area at Plot F									1.60	acres							
									50.85	*acres*	*Total disturbed area*						
Operator				67.75		1	67.75	$/hr	50	day				Equip. Op. (med.) Means 2011			27,100
Grader	597.08					1	597.08	$/day	50	day				30,000 lb grader, Means 2011			29,854
																Total	56,954

	Equipment Cost	Hourly Operating Costs	Equipment Overhead	Operator's Hourly Wage Rate	Hourly Cost	Number of Men or Eq.	Total Eq. & Lab. Costs	Units	Quantity	Units	Production Rate	Units	Equip. + Labor Time/Dis.	Means Reference Number	Unit Cost	Units	Cost
Topsoil for salt stack area																	
Topsoil to cover Plot C, 1.6 acre Plot F to 12"									31.24	acres							
Topsoil excavation/loading									40,321	CY (1)				31 23 23.15 4070	0.57	BCY	22,983
Topsoil transportation, 7 miles one way									50,401	CY				31 23 23.20 4080	5.40	CY	272,165
Topsoil, spread dumped material, no compaction									50,401	CY				31 23 23.17 0020	1.91	LCY	96,266
																Total	391,414

(1) Assumes 25% swell factor.

Ref.	Description	Materials	Means Reference Number	Unit Cost	Unit	Length	Width	Height	Diameter	Area	Volume	Weight	Density	Time	Number	Unit	Swell Factor	Quantity	Unit	Cost
	Seeding Costs - Facility reclaimed area	Std vegetation costs (Note 1)		1000	ACRE					50.9								50.9	ACRE	50,900
	Seeding Costs - Borrow area	Std vegetation costs (Note 1)		1000	ACRE					12.6								12.6	ACRE	12,600
	Reseeding (assume 25%)	Std vegetation costs (Note 1)		1000	ACRE					15.875								15.875	ACRE	15,875
	Total																			79,375

Note 1: Based on DOGM standard unit costs